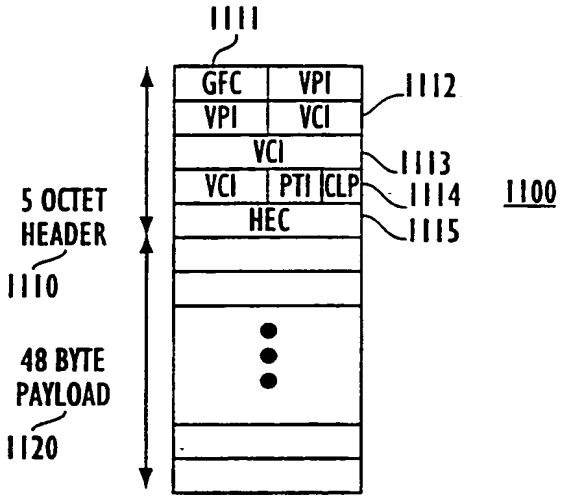
1111
GFC
VPI
VPI
VCI
1112
VCI
1113
VCI
PTI
CLP
1114
HEC
1115
1100
5 OCTET HEADER
1110
48 BYTE PAYLOAD
1120

FIG. 1A

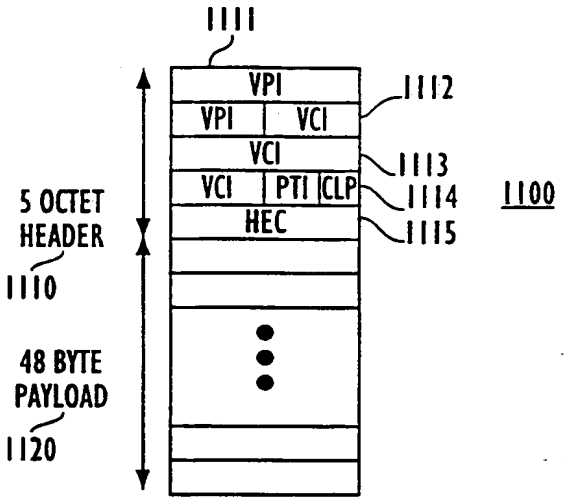
1111
VPI
VPI
VCI
1112
VCI
1113
VCI
PTI
CLP
1114
HEC
1115
1100
5 OCTET HEADER
1110
48 BYTE PAYLOAD
1120

FIG. 1B

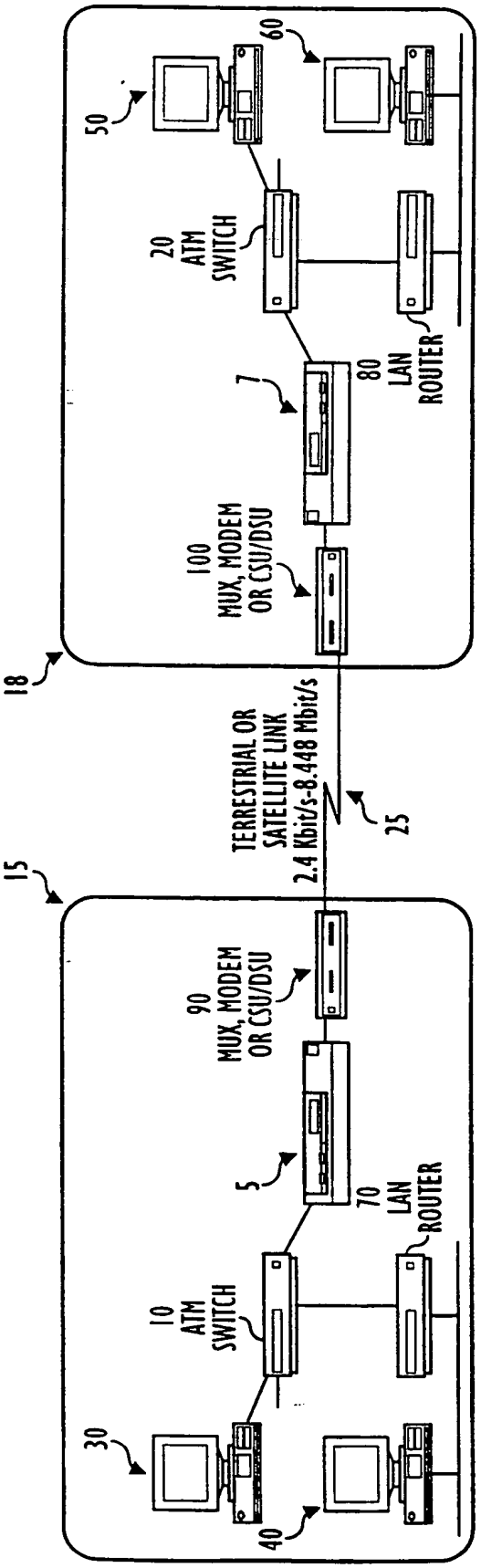
18
50
60
20
ATM
SWITCH
80
LAN
ROUTER
7
100
MUX, MODEM
OR CSU/DSU
TERRESTRIAL OR
SATELLITE LINK
2.4 Kbit/s-8.448 Mbit/s
25
15
90
MUX, MODEM
OR CSU/DSU
5
70
LAN
ROUTER
10
ATM
SWITCH
30
40

FIG. 2A

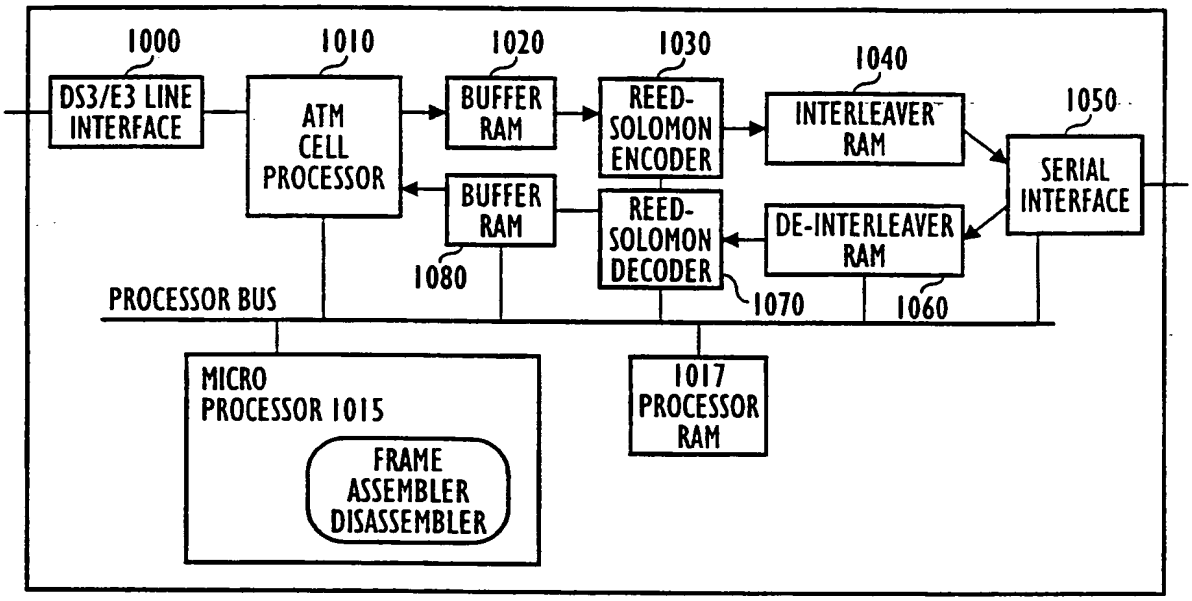
1000
1010
1020
1030
1040
1050
DS3/E3 LINE INTERFACE
ATM CELL PROCESSOR
BUFFER RAM
REED-SOLOMON ENCODER
INTERLEAVER RAM
SERIAL INTERFACE
BUFFER RAM
REED-SOLOMON DECODER
DE-INTERLEAVER RAM
1080
1070
1060
PROCESSOR BUS
MICRO PROCESSOR 1015
FRAME ASSEMBLER DISASSEMBLER
1017 PROCESSOR RAM

FIG. 2B

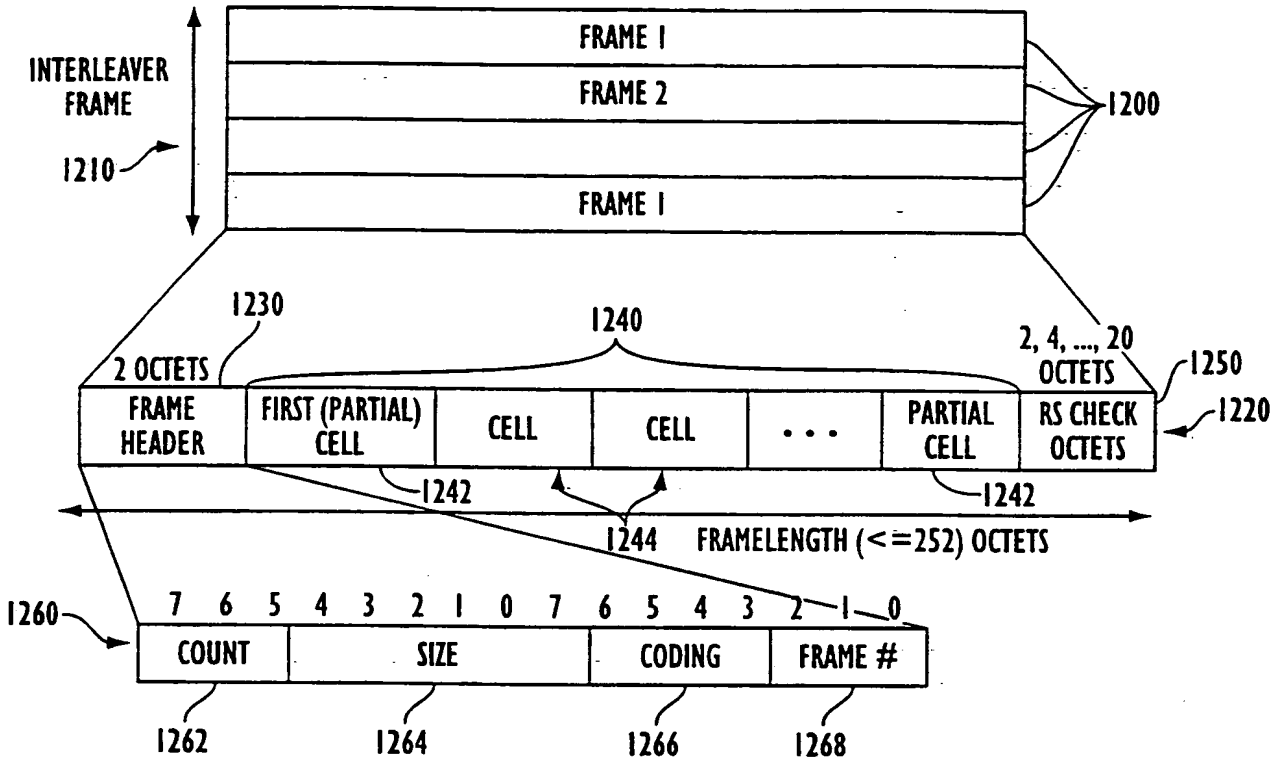
INTERLEAVER FRAME
1210
FRAME 1
FRAME 2
FRAME 1
1200
1230
1240
2 OCTETS
2, 4, ..., 20 OCTETS
1250
FRAME HEADER
FIRST (PARTIAL) CELL
CELL
CELL
. . .
PARTIAL CELL
RS CHECK OCTETS
1220
1242
1242
1244
FRAMELENGTH (<=252) OCTETS
1260
7 6 5 4 3 2 1 0 7 6 5 4 3 2 1 0
COUNT
SIZE
CODING
FRAME #
1262
1264
1266
1268

FIG. 3

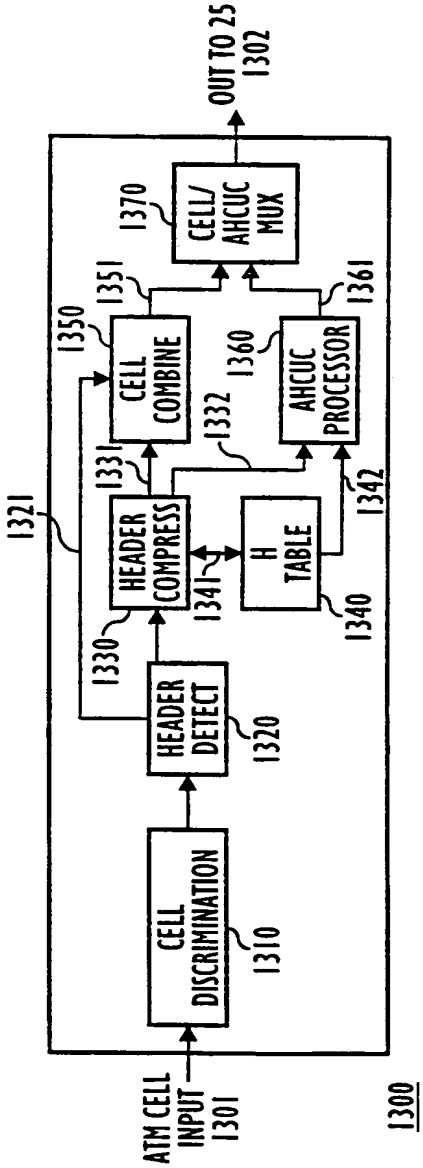
OUT TO 25
1302
CELL/
AHCUC
MUX
1370
1351
1361
1350
CELL
COMBINE
1360
AHCUC
PROCESSOR
1332
1331
1342
1321
HEADER
COMPRESS
1341
H
TABLE
1340
1330
HEADER
DETECT
1320
CELL
DISCRIMINATION
1310
ATM CELL
INPUT
1301
1300

FIG. 4

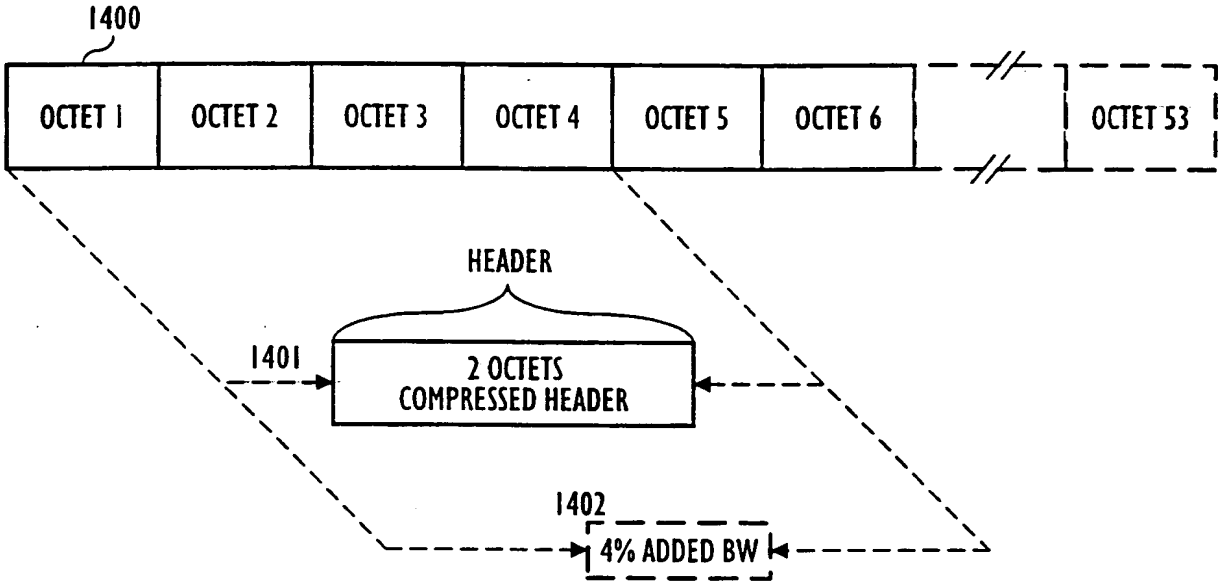
1400
OCTET 1
OCTET 2
OCTET 3
OCTET 4
OCTET 5
OCTET 6
OCTET 53
HEADER
1401
2 OCTETS
COMPRESSED HEADER
1402
4% ADDED BW

FIG. 5A

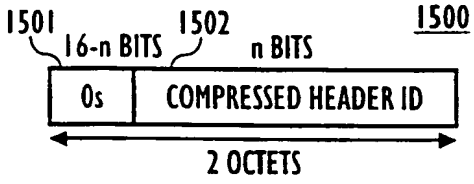
1501
16-n BITS
1502
n BITS
1500
0s
COMPRESSED HEADER ID
2 OCTETS

FIG. 5B

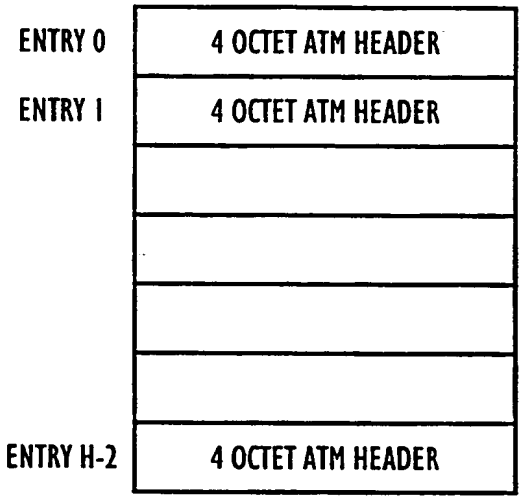
ENTRY 0
4 OCTET ATM HEADER
ENTRY 1
4 OCTET ATM HEADER
ENTRY H-2
4 OCTET ATM HEADER

FIG. 6A

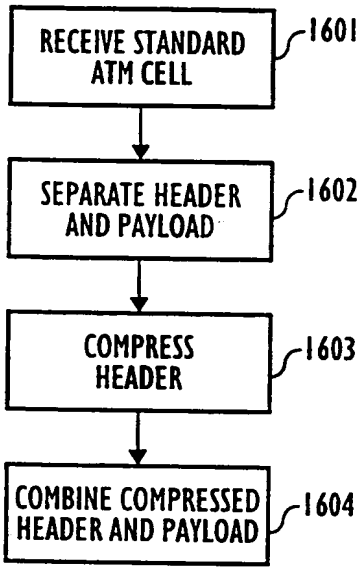
RECEIVE STANDARD ATM CELL
1601
SEPARATE HEADER AND PAYLOAD
1602
COMPRESS HEADER
1603
COMBINE COMPRESSED HEADER AND PAYLOAD
1604

FIG. 6B

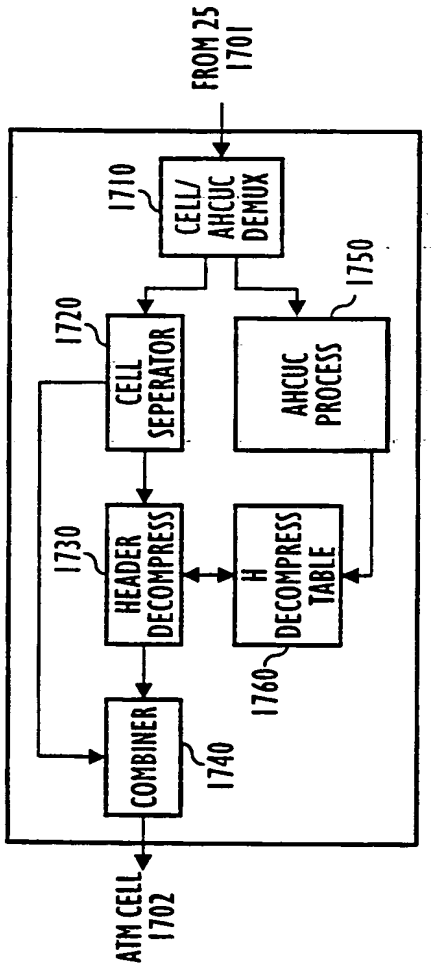
FROM 25
1701
1710
CELL/
AHCUC
DEMUX
1720
CELL
SEPERATOR
1750
AHCUC
PROCESS
1730
HEADER
DECOMPRESS
H
DECOMPRESS
TABLE
1760
COMBINER
1740
ATM CELL
1702

FIG. 7

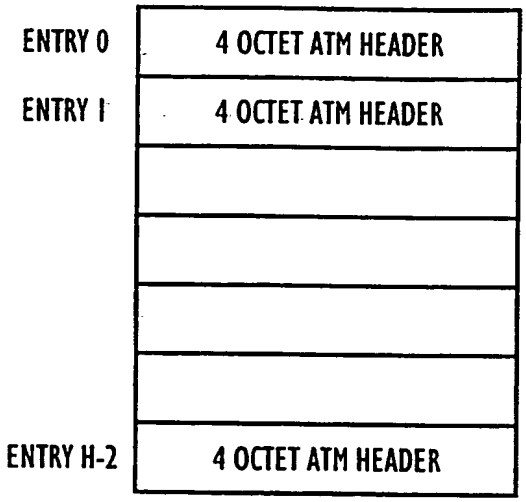
ENTRY 0
4 OCTET ATM HEADER
ENTRY 1
4 OCTET ATM HEADER
ENTRY H-2
4 OCTET ATM HEADER

FIG. 8A

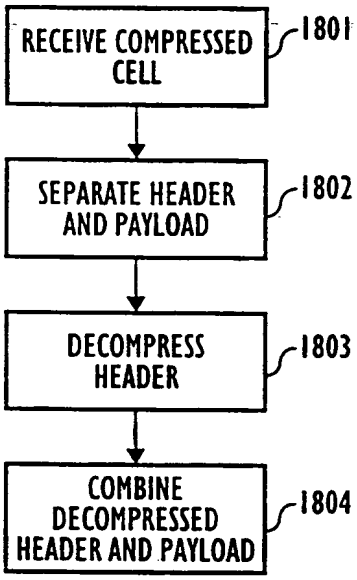
RECEIVE COMPRESSED CELL
1801
SEPARATE HEADER AND PAYLOAD
1802
DECOMPRESS HEADER
1803
COMBINE DECOMPRESSED HEADER AND PAYLOAD
1804

FIG. 8B

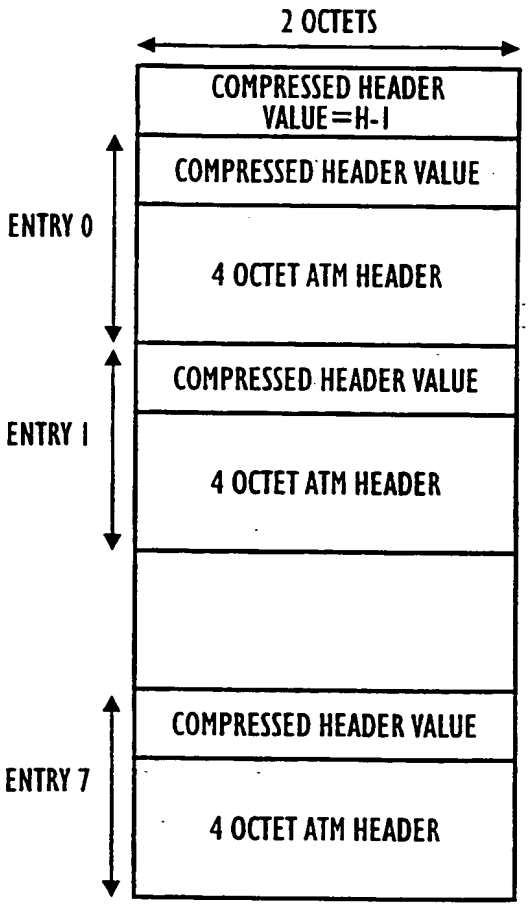
2 OCTETS
COMPRESSED HEADER VALUE=H-1
COMPRESSED HEADER VALUE
4 OCTET ATM HEADER
ENTRY 0
COMPRESSED HEADER VALUE
4 OCTET ATM HEADER
ENTRY 1
COMPRESSED HEADER VALUE
4 OCTET ATM HEADER
ENTRY 7

FIG. 9

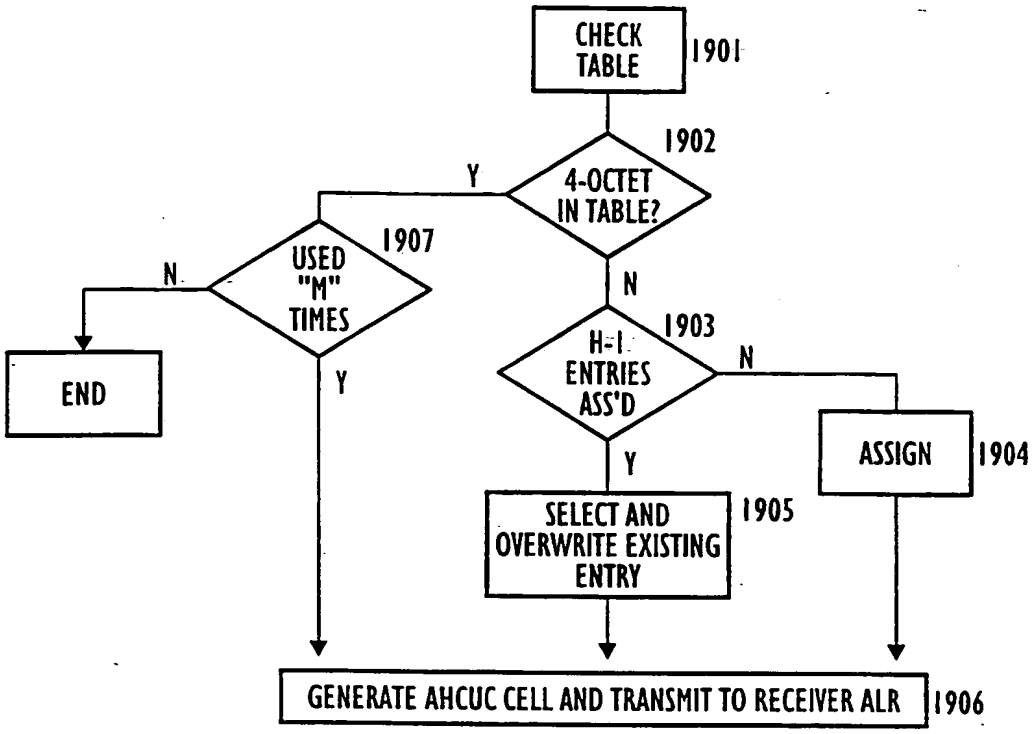

FIG. 10A

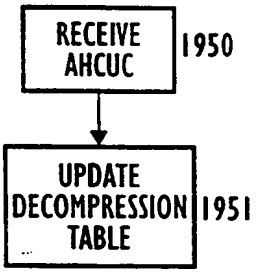

FIG. 10B

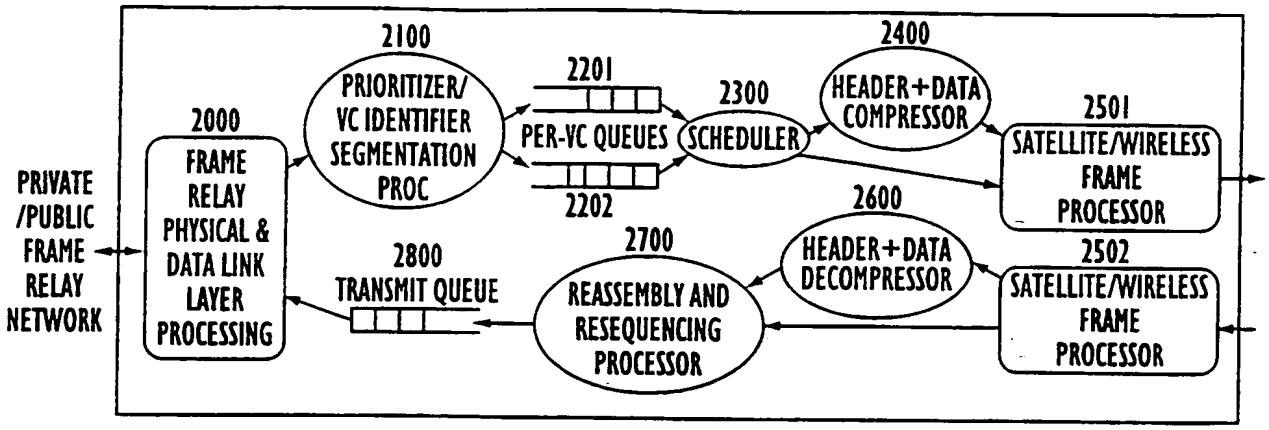

FIG. 11A

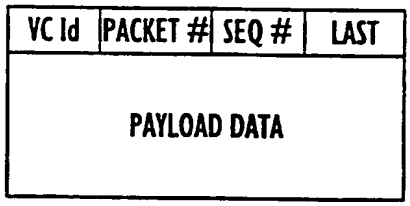

FIG. 11B

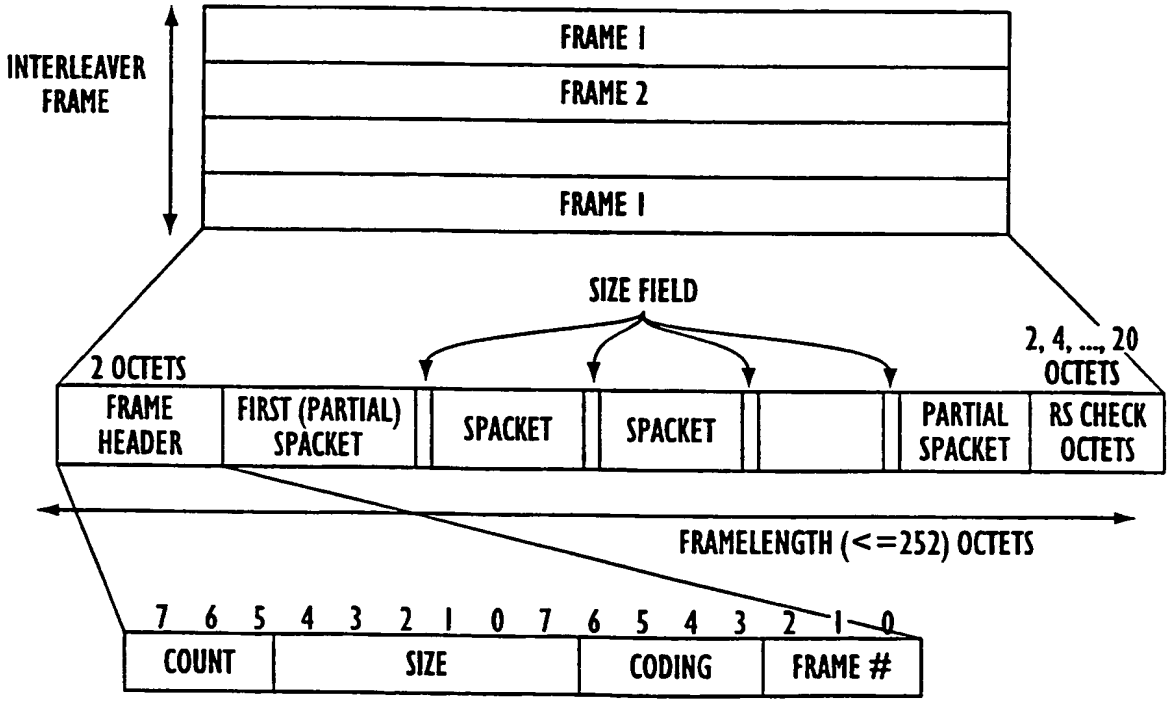

FIG. 11C